

RADIOACTIVE MATERIAL LICENSE NO. UT 2300249**STATEMENT OF BASIS**

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February 10, 2012

Purpose

The purpose of this Statement of Basis is to describe the proposed variance to Radioactive Material License No. UT 2300249 (hereafter License) for the EnergySolutions, LLC (hereafter Licensee) low-level radioactive waste disposal facility near Clive, Tooele County, Utah; located in Section 32, Township 1 South, Range 11 West, Salt Lake Base Meridian (SLBM).

License Variance Summary

License Condition	Description of Variance
16.A	License Condition 16.A prohibits the disposal of sealed sources at the Licensee's Clive facility. This Variance will allow Class A sealed sources to be disposed in the Containerized Waste Facility (CWF) part of the Licensee's Clive facility for a period of one year.

Explanation for Variance to License Condition 16.A

On August 2, 2011, the Licensee submitted to the Division of Radiation Control (DRC) a variance request to the License. Currently, License Condition 16.A prohibits disposal of sealed sources at the Clive facility. In a public meeting on August 18, 2011, the Licensee presented their request to DRC staff. The Licensee made this request in support of the U.S. Department of Energy (DOE) National Nuclear Security Administration (NNSA) Global Threat Reduction Initiative (GTRI). The GTRI's Off-Site Source Recovery Program (OSRP) recovers and disposes certain unused sealed sources from civilian sites. The GTRI's OSRP has requested that certain sealed sources be authorized for disposal at Licensee's Clive, Utah facility.

The DRC evaluated the request to determine if the request complied with the requirements in the Utah Administrative Code (UAC) R313-25-8(1).

- UAC R313-25-8(1)(a)- The DRC agrees that sealed sources were considered by the Nuclear Regulatory Commission (NRC) when developing radioactive waste classification criteria in 10 CFR 61 and therefore is not a unique waste stream. This variance request complies with this requirement;
- UAC R313-25-8(1)(b)- The half-lives of the isotopes in the sources to be disposed is 30 years or less. Therefore the dose limits will not be reached. This variance request complies with this requirement;
- UAC R313-25-8(1)(c)- To comply with this requirement the DRC will allow 1% of the calculated total source term limit (which equals 708,678 curies) of the Class A North Embankment CWF Cell which will ensure compliance with this requirement; and
- UAC R313-25-8(1)(d)- Sealed sources were considered by the NRC in developing 10 CFR-61. Additionally, sealed sources have been evaluated in the NRC's Branch Technical Position paper on Concentration Averaging and Encapsulation (BTP). Therefore, the form of the waste (i.e. sealed sources verses bulk waste) does not

constitute an unanalyzed condition. This variance request complies with this requirement.

The Licensee has administrative and engineering controls at the Clive facility to ensure compliance with dose limits outlined in UAC R313-15. The DRC also compared the request against applicable Federal Regulations and guidance documents.

This Variance request if granted shall have the following conditions:

1. Each individual source and package disposed under the variance will not exceed Class A LLRW limits as defined in UAC R313-15-1009.
2. The Licensee will not seek NRC approval to import foreign sources and will only manage and dispose of domestic sources.
3. Shipments shall be certified in accordance with the EnergySolutions' Waste Characterization Plan Exhibit 2. Sources shall be packaged in accordance with the Clive the 1995 NRC Branch Technical Position paper on encapsulation (1995 BTP), and the August 2011 Draft Branch Technical Position Paper on Concentration Averaging and Encapsulation, Rev. 1 (2011 Draft BTP). If conflict exists between the 1995 BTP and the 2011 Draft BTP, the licensee must follow the statement which is most restrictive.
4. Sources will be disposed in the CWF in accordance with the most currently approved Construction Quality Assurance/Quality Control Manual requirements for CWF disposal and other applicable CWF criteria for disposal.
5. The Licensee will review and approve each shipment before it is transported from the generator's or processor's facility.
6. DRC will be notified at least 7 calendar days prior to scheduled receipt of the first shipment under this variance.
7. The variance will have a term of one year (365 days) from the date the first shipment is received under this variance.
8. The Licensee will track and report the total number, volume, and activity of sources received and the serial numbers or other unique identification number of each source disposed under this variance. This report will be due no later than 3 months after the variance expiration date.
9. The sealed source or sources shall be encased within the disposal containers with grout or concrete;
10. Only sealed sources from the GTRI's OSRP are authorized for disposal under this variance; and
11. The total number of Curies shall be limited to 708,678 Curies which is equivalent to 1% of the calculated total source term limit of the Class A North Embankment.